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| WEEKLY SUSTAINABLE INVESTING SURVEYOR  Week Ended October 7, 2022 |  | October 10, 2022  Shawn Severson & Graham Mattison  [shawn@watertowerresearch.com](mailto:shawn@watertowerresearch.com)  [graham.mattison@watertowerresearch.com](mailto:graham.mattison@watertowerresearch.com) |
| |  |  | | --- | --- | | WTR RESEARCH & EVENTS SUMMARY | | | Previous Research  **EVmo, Inc. (YAYO)**   * [New Location Expands Reach in LA Market with Ideal Location; Growth Plan on Track](https://www.watertowerresearch.com/content/new-location-expands-reach-in-la-market-with-ideal-location-growth-plan-on-track/teaser)   **Capstone Green Energy Corp. (CGRN)**   * [EaaS – A Transformational Business Model and a Win-Win Proposition for All Participants](https://www.watertowerresearch.com/content/eaas-a-transformational-business-model-and-a-win-win-proposition-for-all-participants/teaser) * [1Q23 Results: Revenue Up 16% Y/Y, Gross Margin Improves 9.7% Y/Y; Focus on Key FY23 Objective](https://www.watertowerresearch.com/content/1q23-results-revenue-up-16-y-y-gross-margin-improves-9-7-y-y-focus-on-key-fy23-objectives/teaser)s   **Polar Power, Inc. (POLA)**   * [2Q22 Results: Revenue Down 11.8% Y/Y; Gross Margins Improve 4.8% Y/Y; Overseas Interest Rises](https://www.watertowerresearch.com/content/2q22-results-revenue-down-11-8-y-y-gross-margins-improve-4-8-y-y-overseas-interest-rises/teaser)   **Crown Electrokinetics Corp. (CRKN)**   * [2Q22 Results: Net Loss Decreased By $0.9 Million; First-Gen Product Delayed; Achieved a Key Milestone by Registering First Purchase Order](https://www.watertowerresearch.com/content/2q22-results-net-loss-decreased-by-0-9-million-first-gen-product-delayed-achieved-a-key-milestone-by-registering-first-purchase-order/teaser)   **SES AI Corp. (SES)**   * [2Q22 Results: Operating Loss at $19.1 Million; 2022 Financial Outlook Remains Unchanged; Progress of SES Korea Facility on Track to Support JDA Partners](https://www.watertowerresearch.com/content/2q22-results-operating-loss-at-19-1-million-2022-financial-outlook-remains-unchanged-progress-of-ses-korea-facility-on-track-to-support-jda-partners/teaser) * [New AI-Powered Battery Software to Generate Recurring Revenue; CEO Discusses 2022 Key Milestones](https://www.watertowerresearch.com/content/new-ai-powered-battery-software-to-generate-recurring-revenue-ceo-discusses-2022-key-milestones/teaser)   **Electrovaya, Inc. (EFLVF)**   * [3Q22 Results: Revenue Jumps 124.5% Y/Y; Gross Margin Declines by 12.1% Y/Y; Production Ramped Up to Satisfy Growing Demand](https://www.watertowerresearch.com/content/3q22-results-revenue-jumps-124-5-y-y-gross-margin-declines-by-12-1-y-y-production-ramped-up-to-satisfy-growing-demand/teaser)   **Gevo, Inc. (GEVO)**   * [2Q22 Results: SAF Sales Agreements Worth $2.1 Billion Signed with Multiple Airlines; Company Strengthens Balance Sheet with Equity Finance](https://www.watertowerresearch.com/content/2q22-results-saf-sales-agreements-worth-2-1-billion-signed-with-multiple-airlines-company-strengthens-balance-sheet-with-equity-finance/teaser) | | |  | |  | | --- | | INDEX STATISTICS | | WTR Index—Relative Performance  Source: Thomson Reuters  Key WTR Index Statistics   |  |  | | --- | --- | | **Current Value** | 77.90 | | **52-Week Range** | 77.9-103.4 | | **Total Market Cap ($MM)** | 1,080,629 | | **Index Constituents** | 190 | | **Number of Sectors** | 3 | | **FY21E EPS Growth** | 48.42% | | **FY22E EPS Growth** | 24.50% |   Source: WTR  Sector Market Cap Summary (%)  Source: WTR |   ABOUT THE WTR INDEX  The WTR Sustainable Investing Index is built on 190 companies in three primary segments with multiple sub-sectors: (1) Energy Technology (including Power Generation, Hydrogen & Fuel Cell, Energy Storage, Technology Solutions and Battery Materials); (2) Advanced Transportation Solutions (Electric Vehicles, EV Charging, Clean Fuel Technologies, Advanced Fuel & Chemicals and Transportation Solutions); and (3) Industrial Climate and Ag Tech (Smart Buildings, Emissions Control, Climate & Environmental, ClimateTech Infrastructure and Ag-Tech and Bio-Ag). The index monitors share price performance, valuation metrics, and consensus estimates. Our weekly report also covers industry activity and news flow. |

SUMMARY

* WTR Sustainable Index: During the week ended October 7, 2022, the WTR Sustainable Index underperformed the broader market, falling 11.5% W/W versus the S&P 500 Index (up 1.5%), the Russell 2000 Index (up 2.2%), and the Nasdaq Composite Index (up 0.7%). Advanced Transportation Solutions (75% of the index) drove the underperformance, falling 15.0%, while Energy Technology (8% of index) was down 0.6%. Industrial Climate and Ag Technology outperformed by rising 1.4%.
* Valuation: Based on forward 12-month consensus estimates, the current P/E ratio of the WTR Sustainable Index is 26.2x versus 15.9x for the S&P 500.
* Consensus estimates changes: During the week ended October 7, 2022, there were increases in 2022 revenue estimates for three companies Industrial Climate and Ag Technology. There were decreases in 2022 revenue estimates for one company in Energy Technology and three in Advanced Transportation Solutions. Three companies (two in Advanced Transportation Solutions and one in Industrial Climate and Ag Technology) saw increases in 2022 EPS estimates, while seven companies (four in Energy Technology, two in Advanced Transportation Solutions and one in Industrial Climate and Ag Technology) saw decreases in 2022 EPS estimates.

SHARE PRICE PERFORMANCE SUMMARY

Share Price Performance

ELMS shares were up 120% on news of a successful bid by Mullen Automotive Electric. APGMF shares were down 31% on profit booking.

Figure 1: Top 10 Performers for the Week Ended October 7, 2022

Source: Thomson Reuters

Figure 2: Bottom 10 Performers for the Week Ended October 7, 2022

Source: Thomson Reuters

Figure 3: Relative Performance by Index Sector, Week Ended October 7, 2022

Source: Thomson Reuters

Figure 4: Market Cap Summary by Index Sector, Week Ended October 07, 2022

|  |  |  |
| --- | --- | --- |
| **Sector** | **Mkt Cap ($ MM)** | **% of Total** |
| Energy Technology | 85,419 | 7.9% |
| Advanced Transportation Solutions | 805,782 | 74.6% |
| Industrial Climate and Ag Technology | 189,428 | 17.5% |
| **WTR Index Total** | **1,080,629** | **100.0%** |

Source: Thomson Reuters

Consensus Estimates

Figures 7-8 show W/W changes in FY22 revenue and EPS estimates for selected companies in the WTR Sustainable Index. For the week ended October 7, 2022, there were three increases and four decreases in FY22 revenue estimates, and three increases and seven decreases in FY22 EPS estimates.

Figures 9-10 show the number of companies with W/W changes in consensus revenue and EPS estimates by sub-sector for FY22E.

Figure 5: Consensus Y/Y Revenue Growth Estimates by Index Sector (2021A vs. 2020A, 2022E vs. 2021A and 2023E vs. 2022E)

Source: Thomson Reuters

Figure 6: Consensus Y/Y EPS Growth Estimates by Index Sector (2021A vs. 2020A, 2022E vs. 2021A and 2023E vs. 2022E)

Source: Thomson Reuters

Figure 7: Selected Index Constituents—W/W Change in Revenue Consensus Estimates

Source: Thomson Reuters

Figure 8: Selected Index Constituents—W/W Change in EPS Consensus Estimates

Source: Thomson Reuters

Figure 9: Number of Constituents Per Index Sector With W/W Changes in Consensus Revenue Estimates

Source: Thomson Reuters

Figure 10: Number of Constituents Per Index Sector With W/W Changes in Consensus EPS Estimates

Source: Thomson Reuters

Figure 11: WTR Index—Historical NTM Consensus Revenue Estimates

Source: Thomson Reuters

Figure 12: WTR Index—Historical NTM Consensus EPS Estimates

Source: Thomson Reuters

Figure 13: Selected Index Constituents—PEG Ratio

Source: Thomson Reuters

Figure 14: Selected Index Constituents—Return on Invested Capital (ROIC)

Source: Thomson Reuters

Figure 15: Selected Index Constituents—Y/Y Revenue Consensus (2021A vs. 2020A, 2022E vs. 2021A)

Source: Thomson Reuters

Figure 16: Selected Index Constituents—Y/Y EPS Consensus (2021A vs. 2020A, 2022E vs. 2021A)

Source: Thomson Reuters

Figure 17: Selected Index Constituents—P/E Ratio (left axis) vs. Expected Earnings Growth

Source: Thomson Reuters

Figure 18: Selected Index Constituents—Enterprise Value (EV) to EBITDA Ratio

Source: Thomson Reuters

Figure 19: Selected Index Constituents—P/E Ratio

Source: Thomson Reuters

KEY INDUSTRY AND COMPANY NEWS OF THE WEEK

Energy Technology

Prototype System for Sorting Battery Cells for Second Life Energy Storage Systems Developed in UK

https://www.energy-storage.news/prototype-system-for-sorting-battery-cells-for-second-life-energy-storage-systems-developed-in-uk/  
A prototype system that can test and sort used battery cells for second life applications has been developed by four companies in the UK in a government-funded initiative. The system, pictured above, relies on a combination of robotics, software, and automation to detect the health of individual cells taken from end-of-life battery projects like EVs. The project has been underway since May 2021 and was part-funded by Innovate UK, the UK’s innovation agency. It involved four companies and organizations including Aceleron, the battery energy storage system solution company which designs its systems to be easy to disassemble and re-purpose. Other participants include Innvotek, a specialist in the automation of inspection, maintenance, and the digitization of processes; MEV, an ultrasonics specialist company providing equipment and expertise in operating systems and bespoke application software; and the Brunel Innovation Centre, part of Brunel University. The companies said the prototype has the potential to significantly reduce the unnecessary waste of the raw materials used to build batteries. Carlton Cummins, Aceleron’s CTO and co-founder, said that at the end-of-life point, half of the battery cells in an EV battery will typically still have a state of health higher than 80% which could give them a lifetime of a decade or more in the stationary energy storage sector.

Energy Storage Firm Form Energy Raises $450 million in Fresh Funds

https://renewablesnow.com/news/energy-storage-firm-form-energy-raises-usd-450m-in-fresh-funds-800287/  
US energy storage systems developer Form Energy Inc has raised US$450 million (EUR 455.6m) in a Series E financing round, with the fresh funds coming at a time when the start-up is looking for a site to build its first full-scale battery manufacturing facility. The fund-raiser was led by local private equity firm TPG’s global impact investing platform TPG Rise. It attracted two new backers -- Singapore's sovereign wealth fund GIC and Canada Pension Plan Investment Board (CPP Investments). “Over the last five years, through rigorous R&D and product engineering, our 100-hour iron-air battery product is ready to scale. The Series E funding will accelerate our ability to responsibly build a globally competitive US battery manufacturing supply chain and advance American innovation,” said Form Energy’s co-founder and chief executive Mateo Jaramillo. The Series E round also saw participation from existing investors, including Breakthrough Energy Ventures (BEV), Capricorn Investment Group, Coatue, Energy Impact Partners (EIP), MIT’s The Engine, NGP ETP, Temasek, Prelude Ventures as well as ArcelorMittal. Luxembourg-based steel giant ArcelorMittal in a separate statement said that it has invested a further US$17.5 million in Form Energy as part of the fundraising round via its XCarb Innovation fund. Established in 2017, Form Energy is developing and commercializing a low-cost, iron-air battery technology that is capable of storing electricity for 100 hours at system costs competitive with legacy power plants. The Boston, Massachusetts-based firm is in the process of selecting a site for its first plant, having shortlisted three US states, with a final decision expected to be announced before the end of 2022.

The Role of Semiconductors in the Renewable Energy Transition

https://earth.org/semiconductors/  
Semiconductors are the basic building blocks of modern computing. They are vital components of all electronic systems, from smartphones to cars. But the environmental cost of manufacturing them is becoming increasingly problematic. Energy demand is rising as chip design grows more intricate, with the manufacturing of advanced 3nm chips (N3) predicted to consume up to 7.7 billion kilowatt-hours annually. Paradoxically, semiconductors also facilitate the transition toward a green economy. Decarbonization efforts will increase the usage of renewable energy and electric vehicles around the world, driving demand for chips. The number of power semiconductors used in the global renewable energy market is expected to grow with a compound annual growth rate (CAGR) of 8% to 10% from now to 2027. 90% of the manufacturing capacity for the world’s most advanced semiconductors is in Taiwan. The world’s largest chipmaker – Taiwan Semiconductor Manufacturing Co. (TSMC) – uses 6% of the island’s total power. This figure is expected to exceed 7% in 2022, making TSMC Taiwan’s largest energy consumer. The company produced approximately 15 million tons of carbon in 2020, followed by industry competitors Samsung and Intel with 13 million and 3 million tons, respectively.

Advanced Transportation Solutions

Global Electric Car Sales as of End August 2022

https://cleantechnica.com/2022/10/02/100-electric-vehicles-11-of-new-vehicle-sales-globally/  
Global plugin vehicle registrations were up 60% in August 2022 compared to August 2021, reaching 847,000 units. With a strong month in August, plugins represented 15% share of the overall auto market. Full electrics (BEVs) themselves reached 11% share of the market. In August, BEVs (+66% Y/Y) grew faster than plugin hybrids (+47%), but if we exclude China from the plugin hybrid vehicle (PHEV) tally, we discover that PHEVs would be down 9% Y/Y. August would have been the sixth consecutive month of sales drops for the powertrain. So, excluding China, where PHEVs have evolved to 30–40+ kWh battery systems (working more as extended-range electric vehicles than classic PHEVs), we might also be passing the peak year for PHEVs. Year to date, the plugin share grew to 13% (9.2% BEV). Looking at the monthly best seller table, the Tesla Model Y is back in the leadership position, with its best off-peak result ever. It landed 64,780 deliveries. In the #2 spot, we have the BYD Song, followed by its lower riding sibling, the BYD Qin Plus, which profited from record performances in both powertrain versions (BEV and PHEV). They also benefited from a slower than usual month from the little Wuling Mini EV (4th place, 33,877 registrations).

BYD Sales Hit Fresh Record as Chinese Consumers Embrace Hybrids

<https://www.bloomberg.com/news/articles/2022-10-03/byd-sales-hit-fresh-record-as-chinese-consumers-embrace-hybrids>  
BYD Co. notched up a seventh consecutive monthly sales record for electric and hybrid vehicles in September, selling just over 200,000 units for the first time, and comfortably beating clean car global behemoth Tesla Inc. for deliveries in the third quarter. Sales surged 187% to 200,973 year-on-year, Hong Kong-listed BYD said in an exchange filing Monday. For the third quarter, BYD whose new energy vehicle sales are near-evenly split between pure-electric vehicles and hybrids -- produced 534,164 units. The US manufacturer helmed by Elon Musk, which only makes pure electric cars, said Sunday it delivered 343,830 vehicles, missing estimates, as supply-chain snarls continued. Closer to home, emerging Chinese EV brands -- XPeng Inc., Nio Inc. and Li Auto Inc. -- reported a mixed set of monthly sales numbers. XPeng reported 8,468 deliveries, the lowest in seven months. Shares in the Guangzhou-based company have slumped 76% year-to-date, falling below their IPO price, prompting founder He Xiaopeng to increase his holdings to shore up confidence in the company.

Electric Vehicle Charging to Get Biofuel Credits Under EPA Plan

https://www.reuters.com/business/autos-transportation/exclusive-us-epa-expected-propose-electric-cars-be-eligible-renewable-fuel-2022-10-05/  
According to an agency report, the US Environmental Protection Agency (EPA) plans to include electric cars in the Renewable Fuel Standard (RFS), which regulates the blending of renewable fuels. This could benefit large electric car manufacturers such as Tesla. The RFS ensures that refiners are required to blend a certain quota of biofuels into the fuel pool themselves or buy tradable credits called RINs from companies that add biofuels to the pool. Several insiders have now reportedly confirmed to Reuters news agency that the EPA wants to expand the RFS program to include electric cars. This would mean that ‘electric RINs’, or e-RINs, could also be used to offset fossil fuel feed-in. It would bring new revenue to the sellers of the e-RINs. According to the report, electric vehicles would “likely qualify for credits under the program’s ‘D3’ mandate pool, which includes cellulosic biofuels.” Reuters had previously reported that the Biden administration was said to have met with Tesla to collaborate on the design of an e-RIN program. As an electric-only car manufacturer, Tesla would be one of the beneficiaries of the new rule if it comes as Reuters described. The EPA would not comment on the information when asked by Reuters. EPA spokesman Tim Carroll indicated only that the agency intends to meet deadlines for implementing the RFS program. EPA has until Nov. 16 to propose the exact rules for 2023. However, EPA is expected to submit its proposals to the White House for approval as early as next week.

Industrial Climate and Ag Technology

**What Investors Should Know About Investing in Food Innovation and Agricultural Technology**

<https://seekingalpha.com/article/4544171-what-investors-should-know-about-investing-in-food-innovation-and-agricultural-technology>  
Food innovation and AgTech solutions can bridge the food production and consumption gap, while combatting climate change and food insecurity. Unsustainable production and consumption practices have pushed global food systems to the brink. Global food production failed to nourish 811 million people in 2020, while contributing 34% to global carbon emissions. Farmers have experienced extreme weather causing crops to wither and incomes to dwindle, while consumers lament soaring prices. Meanwhile, feeding the growing population is a critical issue. The global population is expected to reach 9.7 billion by 2050, while the middle class is expected to grow to more than half of the world’s population by 2030, driving increased consumption. Can the world feed that many people? It is imperative that our food systems of the future evolve to keep pace with growing populations and a rising middle class that demands more well-rounded diets and nutrient-rich foods. At the same time, food production needs to become more resilient and efficient to withstand climate events and inflationary pressures. Fortunately, there’s precedent. From the 1960s to the 1990s, the first “food revolution” transformed global agriculture. Over that period, rice and wheat yields in Asia doubled and the population increased by 60%, but grain prices remained low.

WTR SUSTAINABLE INDEX CONSTITUENTS

Figure 20: Energy Technology Comp Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | FY19 | FY20 | FY21 | FY19 | FY20 | FY21 | FY19 | FY20 | FY21 | FY19 | FY20 | FY21 |
| Ticker | Price | MCap ($m) | EV  ($m) | TTM EBITDA | EV/ EBITDA | Rev ($m) | Rev ($m) | Rev ($m) | EV/Rev | EV/Rev | EV/Rev | EPS ($) | EPS ($) | EPS ($) | P/E | P/E | P/E |
| **Power Generation** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BWEN | 3.03 | 62 | 47 | -4 | N.M. | 178 | 198 | 146 | 0.3 | 0.2 | 0.3 | -0.28 | -0.09 | -0.17 | N.M. | N.M. | N.M. |
| CGRN | 3.28 | 50 | 92 | -13 | N.M. | 69 | 68 | 70 | 1.3 | 1.4 | 1.3 | -2.70 | -1.38 | -1.46 | N.M. | N.M. | N.M. |
| ENS | 70.88 | 2,882 | 3,956 | 314 | 0.0 | 3,088 | 2,978 | 3,357 | 1.3 | 1.3 | 1.2 | 4.66 | 4.17 | 3.87 | 15.2 | 17.0 | 18.3 |
| LTBR | 7.18 | 80 | 40 | -8 | N.M. | - | - | - | N.M. | N.M. | N.M. | -3.66 | -2.32 | -1.71 | N.M. | N.M. | N.M. |
| NVVE | 4.02 | 90 | 221 | N.M. | N.M. | 3 | 4 | 4 | 85.8 | 52.5 | 52.8 | -0.16 | -0.26 | -1.62 | N.M. | N.M. | N.M. |
| OPTT | 1.24 | 69 | 2 | -21 | N.M. | 2 | 1 | 2 | 1.4 | 1.9 | 1.3 | -1.44 | -0.45 | -0.36 | N.M. | N.M. | N.M. |
| SMR | 14.87 | 3,285 | 2,967 | N.M. | N.M. | 0 | 1 | 3 | 7,954.2 | 4,944.9 | 1,036.7 | -0.32 | -0.40 | -0.47 | N.M. | N.M. | N.M. |
| ORA | 95.84 | 5,361 | 5,978 | 376 | 0.0 | 746 | 705 | 663 | 8.0 | 8.5 | 9.0 | 1.75 | 1.35 | 1.31 | 54.7 | 71.0 | 73.4 |
| PPSI | 4.03 | 39 | 63 | -3 | N.M. | 21 | 19 | 18 | 3.1 | 3.2 | 3.4 | -1.46 | -0.30 | -0.35 | N.M. | N.M. | N.M. |
| POLA | 3.68 | 47 | 41 | -2 | N.M. | 25 | 9 | 17 | 1.7 | 4.6 | 2.4 | -0.40 | -1.01 | -0.25 | N.M. | N.M. | N.M. |
| TGEN | 1.27 | 32 | 26 | N.M. | N.M. | 33 | 28 | 24 | 0.8 | 0.9 | 1.1 | -0.12 | -0.17 | 0.02 | N.M. | N.M. | 76.6 |
| **Hydrogen & Fuel Cell** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BLDP | 11.45 | 2,673 | 2,634 | -108 | N.M. | 106 | 104 | 105 | 24.9 | 25.4 | 25.2 | -0.15 | -0.20 | -0.38 | N.M. | N.M. | N.M. |
| BE | 30.46 | 5,456 | 4,731 | -167 | N.M. | 785 | 794 | 972 | 6.0 | 6.0 | 4.9 | -2.63 | -1.08 | -0.95 | N.M. | N.M. | N.M. |
| CPWHF | 8.25 | 1,538 | 2,245 | -24 | N.M. | 15 | 32 | 31 | 146.7 | 70.8 | 72.9 | -0.03 | -0.09 | -0.12 | N.M. | N.M. | N.M. |
| FHYD.V | 3.21 | 125 | 114 | -7 | N.M. | - | 0 | - | N.M. | 378.9 | N.M. | -0.02 | -0.03 | -0.18 | N.M. | N.M. | N.M. |
| FCEL | 5.11 | 1,976 | 2,648 | -86 | N.M. | 61 | 71 | 70 | 43.6 | 37.4 | 38.0 | -1.65 | -0.42 | -0.29 | N.M. | N.M. | N.M. |
| HTOO | 7.84 | 103 | 60 | N.M. | N.M. | N.M. | - | - | N.M. | N.M. | N.M. | NULL | -0.50 | 1.80 | N.M. | N.M. | 4.4 |
| JEV.V | 0.40 | 71 | 106 | -6 | N.M. | 0 | 0 | 0 | 447.9 | 1,916.0 | 1,770.1 | -0.07 | -0.13 | -0.03 | N.M. | N.M. | N.M. |
| NXH.V | 1.95 | 35 | 32 | -12 | N.M. | N.M. | 0 | 0 | N.M. | 18,067.1 | 181.1 | NULL | -0.30 | -0.74 | N.M. | N.M. | N.M. |
| PLUG | 29.54 | 17,095 | 13,189 | -540 | N.M. | 230 | 306 | 502 | 57.4 | 43.0 | 26.3 | -0.36 | -0.97 | -0.81 | N.M. | N.M. | N.M. |
| LPEN | 1.90 | 51 | 67 | -24 | N.M. | 0 | 1 | 1 | 144.1 | 123.4 | 47.3 | -0.13 | -0.27 | -0.80 | N.M. | N.M. | N.M. |
| MOVE.NLB | 0.29 | 91 | 330 | -52 | N.M. | 28 | - | - | 12.0 | N.M. | N.M. | 0.60 | -1.80 | -0.28 | 0.5 | N.M. | N.M. |
| STRXF | NULL | 1 | 12 | N.M. | N.M. | 0 | 0 | 0 | 244.6 | 1,210.3 | 1,444.8 | -0.02 | -0.01 | -0.01 | N.M. | N.M. | N.M. |
| HYSR | 0.04 | 178 | 261 | -4 | N.M. | - | - | - | N.M. | N.M. | N.M. | 0.01 | -0.04 | -0.04 | 7.7 | N.M. | N.M. |
| VIHD | 4.70 | 99 | 197 | N.M. | N.M. | - | - | - | N.M. | N.M. | N.M. | -2.04 | -1.06 | -0.08 | N.M. | N.M. | N.M. |
| **Energy Storage** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EFLVF | 0.78 | 116 | 156 | -6 | N.M. | 5 | 15 | 12 | 31.8 | 10.7 | 13.4 | -0.07 | -0.04 | -0.06 | N.M. | N.M. | N.M. |
| ENS | 70.88 | 2,882 | 3,956 | 314 | 0.0 | 3,088 | 2,978 | 3,357 | 1.3 | 1.3 | 1.2 | 4.66 | 4.17 | 3.87 | 15.2 | 17.0 | 18.3 |
| ENVX | 22.75 | 3,564 | 3,564 | -82 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.28 | -1.07 | NULL | N.M. | N.M. | N.M. |
| EOSE | 2.57 | 97 | 409 | -167 | N.M. | - | 0 | 5 | N.M. | 1,867.0 | 88.9 | -0.00 | -1.40 | -2.38 | N.M. | N.M. | N.M. |
| FLNC | 18.12 | 3,123 | 3,123 | -276 | N.M. | 92 | 561 | 681 | 33.9 | 5.6 | 4.6 | -0.28 | -0.28 | -0.95 | N.M. | N.M. | N.M. |
| FLUX | 2.95 | 47 | 154 | -16 | N.M. | 9 | 17 | 26 | 16.5 | 9.1 | 5.9 | -2.84 | -2.80 | -1.08 | N.M. | N.M. | N.M. |
| FREY | 12.50 | 1,459 | 742 | -112 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.01 | -0.09 | -1.24 | N.M. | N.M. | N.M. |
| MVST | 2.96 | 896 | 1,358 | -232 | N.M. | 76 | 108 | 152 | 17.8 | 12.6 | 8.9 | -0.38 | -0.27 | -0.79 | N.M. | N.M. | N.M. |
| NNOMF | 2.70 | 272 | 189 | -10 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.06 | -0.07 | -0.12 | N.M. | N.M. | N.M. |
| QS | 13.63 | 5,898 | 8,098 | -289 | N.M. | - | - | - | N.M. | N.M. | N.M. | NULL | -6.67 | -0.11 | N.M. | N.M. | N.M. |
| RMO | 0.77 | 143 | 374 | -149 | N.M. | - | 9 | 17 | N.M. | 41.7 | 22.3 | 0.06 | -0.10 | 0.05 | 12.3 | N.M. | 15.2 |
| STEM | 15.58 | 2,403 | 2,157 | -69 | N.M. | - | - | 127 | N.M. | N.M. | 16.9 | -0.00 | -2.36 | -0.87 | N.M. | N.M. | N.M. |
| PGTK | 0.92 | 43 | 43 | N.M. | N.M. | 130 | 61 | 15 | 0.3 | 0.7 | 2.8 | 0.23 | -0.05 | NULL | 4.1 | N.M. | N.M. |
| **Technology Solutions** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PPSI | 4.03 | 39 | 63 | -3 | N.M. | 21 | 19 | 18 | 3.1 | 3.2 | 3.4 | -1.46 | -0.30 | -0.35 | N.M. | N.M. | N.M. |
| POLA | 3.68 | 47 | 41 | -2 | N.M. | 25 | 9 | 17 | 1.7 | 4.6 | 2.4 | -0.40 | -1.01 | -0.25 | N.M. | N.M. | N.M. |
| AMSC | 6.13 | 175 | 177 | -17 | N.M. | 64 | 87 | 108 | 2.8 | 2.0 | 1.6 | -0.81 | -0.95 | -0.68 | N.M. | N.M. | N.M. |
| IPWR | 14.19 | 84 | 48 | -6 | N.M. | - | 0 | 1 | N.M. | 111.9 | 83.1 | -1.89 | -2.20 | -0.82 | N.M. | N.M. | N.M. |
| SHLS | 26.24 | 4,387 | 4,286 | 49 | 0.0 | 144 | 176 | 213 | 29.7 | 24.4 | 20.1 | 0.15 | 0.25 | 0.21 | 169.6 | 105.8 | 124.8 |
| KULR | 1.65 | 177 | 275 | -14 | N.M. | 1 | 1 | 2 | 330.9 | 440.4 | 113.9 | -0.02 | -0.03 | -0.15 | N.M. | N.M. | N.M. |
| GHM | 8.92 | 95 | 86 | 1 | 0.1 | 91 | 97 | 123 | 0.9 | 0.9 | 0.7 | 0.19 | 0.24 | -0.75 | 47.1 | 37.4 | N.M. |
| TPIC | 24.55 | 915 | 640 | -20 | N.M. | 1,437 | 1,670 | 1,733 | 0.4 | 0.4 | 0.4 | -0.04 | -0.32 | -3.79 | N.M. | N.M. | N.M. |
| **Battery Materials** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ASPN | 14.37 | 581 | 1,577 | -60 | N.M. | 139 | 100 | 122 | 11.3 | 15.7 | 13.0 | -0.60 | -0.83 | -1.34 | N.M. | N.M. | N.M. |
| AQMS | 1.05 | 81 | 79 | -16 | N.M. | 5 | 0 | 0 | 16.1 | 728.1 | 454.5 | -0.85 | -0.33 | -0.25 | N.M. | N.M. | N.M. |
| LICY | 8.08 | 1,417 | 1,618 | -66 | N.M. | 0 | 1 | 7 | 33,606.2 | 2,042.9 | 219.5 | -0.03 | -0.06 | -1.39 | N.M. | N.M. | N.M. |
| PLL | 66.70 | 1,198 | 786 | N.M. | N.M. | 0 | - | - | 6,119.1 | N.M. | N.M. | -0.02 | -0.71 | -1.35 | N.M. | N.M. | N.M. |
| LAC | 31.15 | 4,190 | 3,275 | -63 | N.M. | - | - | - | N.M. | N.M. | N.M. | 0.60 | -0.37 | -0.28 | 51.6 | N.M. | N.M. |
| NLC.V | 6.50 | 755 | 174 | -7 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.01 | -0.06 | 0.02 | N.M. | N.M. | 267.8 |
| LTHM | 30.03 | 5,383 | 4,069 | 156 | 0.0 | 388 | 288 | 420 | 10.5 | 14.1 | 9.7 | 0.42 | -0.04 | -0.11 | 71.8 | N.M. | N.M. |
| SLI | 6.53 | 1,095 | 557 | -18 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.11 | -0.11 | -0.21 | N.M. | N.M. | N.M. |
| LITM | 3.15 | 56 | 56 | N.M. | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.09 | -0.01 | -0.03 | N.M. | N.M. | N.M. |
| RCKTF | 2.88 | 212 | 390 | -25 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.03 | -0.08 | -0.43 | N.M. | N.M. | N.M. |
| EEMMF | - | - | 91 | -3 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.10 | -0.07 | -0.10 | N.M. | N.M. | N.M. |
| LGO | 10.05 | 510 | 534 | 69 | 0.0 | 104 | 122 | 198 | 5.1 | 4.4 | 2.7 | -0.50 | 0.12 | 0.40 | N.M. | 83.8 | 25.4 |
| NMG | 5.53 | 310 | 338 | N.M. | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.75 | -0.85 | -0.91 | N.M. | N.M. | N.M. |
| MP | 38.02 | 6,750 | 7,589 | 350 | 0.0 | - | 134 | 332 | N.M. | 56.5 | 22.9 | NULL | 0.27 | 0.79 | N.M. | 140.7 | 47.8 |
| GEM.V | 0.08 | 4 | 4 | -2 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.11 | -0.08 | -0.04 | N.M. | N.M. | N.M. |
| OROCF | 8.93 | 5,618 | 1,806 | 121 | 0.0 | 81 | 77 | 85 | 22.3 | 23.4 | 21.3 | 0.15 | -0.15 | -0.17 | 59.8 | N.M. | N.M. |
| WWR | 1.47 | 69 | -39 | N.M. | N.M. | - | - | - | N.M. | N.M. | N.M. | -2.73 | -1.11 | -0.43 | N.M. | N.M. | N.M. |
| NGPHF | 0.44 | 51 | 51 | -4 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.01 | -0.01 | -0.04 | N.M. | N.M. | N.M. |
| FCSMD | 0.22 | 12 | 21 | -5 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.12 | -0.14 | -0.07 | N.M. | N.M. | N.M. |
| MGPHF | 0.30 | 43 | 60 | -4 | N.M. | - | - | - | N.M. | N.M. | N.M. | 0.01 | -0.03 | -0.05 | 49.3 | N.M. | N.M. |
| GPHOF | 0.94 | 81 | 129 | -4 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.05 | -0.05 | -0.12 | N.M. | N.M. | N.M. |
| LMRMF | 0.04 | 8 | 23 | -3 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.02 | -0.01 | -0.01 | N.M. | N.M. | N.M. |
| GPHBF | 0.05 | 8 | 16 | -2 | N.M. | 1 | 1 | 2 | 17.0 | 17.4 | 8.3 | -0.01 | -0.01 | -0.01 | N.M. | N.M. | N.M. |
| APGMF | 0.23 | 14 | 15 | -5 | N.M. | 0 | 0 | 0 | 117.6 | 175.8 | 118.6 | -0.08 | -0.07 | -0.06 | N.M. | N.M. | N.M. |
| GMGMF | 2.88 | 235 | 235 | N.M. | N.M. | - | - | - | N.M. | N.M. | N.M. | NULL | NULL | NULL | N.M. | N.M. | N.M. |
| FGPHF | 0.10 | 59 | 112 | -4 | N.M. | 0 | 0 | 0 | 4,940.2 | 388.2 | 329.0 | -0.01 | -0.01 | -0.01 | N.M. | N.M. | N.M. |
| EAF | 7.09 | 1,819 | 4,086 | 680 | 0.0 | 1,791 | 1,224 | 1,346 | 2.3 | 3.3 | 3.0 | 2.61 | 1.62 | 1.47 | 2.7 | 4.4 | 4.8 |
| CYDVF | 1.07 | 157 | 216 | -3 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.02 | -0.01 | -0.02 | N.M. | N.M. | N.M. |
| LOOP | 7.23 | 343 | 288 | -47 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.38 | -0.76 | -0.94 | N.M. | N.M. | N.M. |
| TMC | 1.00 | 227 | 384 | -165 | N.M. | - | - | - | N.M. | N.M. | N.M. | NULL | -0.25 | -0.69 | N.M. | N.M. | N.M. |
| LICY | 8.08 | 1,417 | 1,618 | -66 | N.M. | 0 | 1 | 7 | 33,606.2 | 2,042.9 | 219.5 | -0.03 | -0.06 | -1.39 | N.M. | N.M. | N.M. |
| UMICF | 37.00 | 9,190 | 10,956 | 1,212 | 0.0 | 17,485 | 20,710 | 24,054 | 0.6 | 0.5 | 0.5 | 1.29 | 1.71 | 3.00 | 28.7 | 21.6 | 12.3 |
| ABML | 0.82 | 529 | 1,147 | -33 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.12 | -0.06 | -0.12 | N.M. | N.M. | N.M. |
| AMYZF | 0.40 | 97 | 196 | -18 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.02 | 0.00 | -0.07 | N.M. | 191.4 | N.M. |
| **Average** |  |  |  |  |  |  |  |  |  | **713.2** | **133.3** |  |  |  | **39.3** | **69.0** | **57.4** |

Source: Thomson Reuters

Figure 21: Advanced Transportation Solutions Comp Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | FY18 | FY19 | FY20 | FY18 | FY19 | FY20 | FY18 | FY19 | FY20 | FY18 | FY19 | FY20 |
| Ticker | Price | MCap ($m) | EV  ($m) | TTM EBITDA | EV/ EBITDA | Rev ($m) | Rev ($m) | Rev ($m) | EV/Rev | EV/Rev | EV/Rev | EPS ($) | EPS ($) | EPS ($) | P/E | P/E | P/E |
| **Electric Vehicles** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FUV | 3.24 | 126 | 281 | -48 | N.M. | 1 | 2 | 4 | 284.1 | 129.0 | 64.0 | -0.85 | -0.63 | -1.19 | N.M. | N.M. | N.M. |
| ARVL | 1.43 | 913 | 4,323 | -183 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.07 | -0.14 | -0.74 | N.M. | N.M. | N.M. |
| AYRO | 1.12 | 41 | -10 | N.M. | N.M. | 1 | 2 | 3 | -11.0 | -6.1 | -3.7 | -2.95 | -0.69 | -0.94 | N.M. | N.M. | N.M. |
| BRDS | 0.63 | 188 | 1,603 | N.M. | N.M. | 151 | 95 | 205 | 10.6 | 16.9 | 7.8 | -1.41 | -0.76 | -0.76 | N.M. | N.M. | N.M. |
| GOEV | 4.28 | 1,167 | 1,617 | -552 | N.M. | - | 3 | - | N.M. | 634.2 | N.M. | 0.03 | -0.82 | -1.52 | 138.4 | N.M. | N.M. |
| EH | 7.88 | 452 | 812 | -49 | N.M. | 122 | 180 | 57 | 6.7 | 4.5 | 14.3 | -0.69 | -0.80 | -2.77 | N.M. | N.M. | N.M. |
| SOLO | 1.69 | 201 | 48 | -65 | N.M. | 1 | 1 | 2 | 82.5 | 84.8 | 23.0 | -0.64 | -1.08 | -0.37 | N.M. | N.M. | N.M. |
| ELMS | 0.01 | 1 | 432 | -35 | N.M. | - | - | - | N.M. | N.M. | N.M. | NULL | -0.00 | -0.91 | N.M. | N.M. | N.M. |
| EVTV | 5.50 | 82 | 1,329 | -10 | N.M. | 13 | 1 | 2 | 105.8 | 2,150.4 | 650.5 | -0.07 | -0.06 | -0.03 | N.M. | N.M. | N.M. |
| FFIE | 2.69 | 813 | 1,294 | -409 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.43 | -0.46 | -1.38 | N.M. | N.M. | N.M. |
| FSR | 9.59 | 2,865 | 4,124 | -454 | N.M. | - | - | 0 | N.M. | N.M. | 38,910.3 | -0.04 | -0.47 | -1.59 | N.M. | N.M. | N.M. |
| GP | 3.75 | 87 | 165 | -13 | N.M. | 14 | 13 | 17 | 12.2 | 12.4 | 9.6 | -0.32 | -0.43 | -0.66 | N.M. | N.M. | N.M. |
| HYLN | 4.49 | 781 | 698 | -113 | N.M. | - | - | 0 | N.M. | N.M. | 3,491.4 | 0.08 | 3.20 | -0.54 | 56.3 | 1.4 | N.M. |
| HYZN | 2.38 | 590 | 1,158 | -111 | N.M. | - | - | 6 | N.M. | N.M. | 191.4 | NULL | -0.06 | -0.03 | N.M. | N.M. | N.M. |
| LI | 32.49 | 33,627 | 24,792 | -160 | N.M. | 284 | 9,457 | 27,010 | 87.2 | 2.6 | 0.9 | -1.94 | -0.43 | -0.16 | N.M. | N.M. | N.M. |
| ZEV | 3.66 | 277 | 347 | -58 | N.M. | 3 | 9 | 21 | 109.5 | 38.1 | 16.5 | -0.17 | -0.56 | -1.56 | N.M. | N.M. | N.M. |
| RIDE | 2.80 | 576 | 434 | -301 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.06 | -1.28 | -2.27 | N.M. | N.M. | N.M. |
| LCID | 18.66 | 31,215 | 58,439 | -2,008 | N.M. | 5 | 4 | 27 | 12,731.8 | 14,697.9 | 2,155.5 | -0.17 | -0.44 | -2.93 | N.M. | N.M. | N.M. |
| NKLA | 6.83 | 2,961 | 3,608 | -570 | N.M. | - | 0 | - | N.M. | 37,974.9 | N.M. | 0.09 | -1.07 | -1.65 | 74.1 | N.M. | N.M. |
| NIO | 21.11 | 35,263 | 47,043 | -914 | N.M. | 7,825 | 16,258 | 36,136 | 6.0 | 2.9 | 1.3 | -11.03 | -4.73 | -6.72 | N.M. | N.M. | N.M. |
| NIU | 7.30 | 562 | 1,119 | 26 | 0.0 | 2,076 | 2,444 | 3,705 | 0.5 | 0.5 | 0.3 | 1.12 | 0.98 | 1.30 | 6.5 | 7.4 | 5.6 |
| PTRA | 6.97 | 1,569 | 1,410 | -128 | N.M. | - | - | 243 | N.M. | N.M. | 5.8 | NULL | -0.97 | -2.07 | N.M. | N.M. | N.M. |
| REE | 1.49 | 480 | 1,487 | -540 | N.M. | 1 | 0 | 0 | 2,184.1 | 3,833.4 | N.M. | -0.04 | -0.22 | -1.59 | N.M. | N.M. | N.M. |
| TSLA | 900.09 | 940,135 | 1,082,175 | 14,288 | 0.0 | 24,578 | 31,536 | 53,823 | 44.0 | 34.3 | 20.1 | -0.87 | 0.74 | 5.69 | N.M. | 1,217.1 | 158.1 |
| LEV | 5.29 | 1,005 | 1,717 | -62 | N.M. | 31 | 23 | 58 | 55.6 | 73.3 | 29.8 | -0.02 | -0.52 | -0.27 | N.M. | N.M. | N.M. |
| VMC.V | 1.96 | 61 | 125 | -8 | N.M. | 19 | 15 | 33 | 6.8 | 8.6 | 3.8 | -0.16 | -0.09 | -0.19 | N.M. | N.M. | N.M. |
| VLTA | 2.91 | 490 | 968 | N.M. | N.M. | 15 | 19 | 32 | 63.4 | 49.7 | 29.9 | -0.23 | -0.41 | -1.71 | N.M. | N.M. | N.M. |
| WKHS | 4.35 | 712 | 485 | -185 | N.M. | 0 | 1 | -1 | 1,289.1 | 348.6 | -569.8 | -0.58 | 0.79 | -3.09 | N.M. | 5.5 | N.M. |
| XL | 1.40 | 199 | 115 | -63 | N.M. | 7 | 20 | 16 | 15.9 | 5.6 | 7.3 | -0.19 | -0.70 | 0.23 | N.M. | N.M. | 6.1 |
| XOS | 1.93 | 321 | 402 | -90 | N.M. | 1 | 3 | 5 | 350.8 | 152.3 | 79.7 | -0.03 | -0.10 | 0.36 | N.M. | N.M. | 5.4 |
| XPEV | 24.41 | 16,008 | 37,083 | -1,158 | N.M. | 2,321 | 5,844 | 20,988 | 16.0 | 6.3 | 1.8 | -2.97 | -3.12 | -2.88 | N.M. | N.M. | N.M. |
| PEV | 3.73 | 73 | 73 | N.M. | N.M. | N.M. | 4 | 5 | N.M. | 18.3 | 16.2 | NULL | -0.09 | -0.07 | N.M. | N.M. | N.M. |
| **EV Charging** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ADSE | 8.00 | 390 | 446 | -0 | N.M. | 0 | 0 | 0 | 23,337.4 | 9,404.9 | 13,484.0 | -0.00 | -0.00 | -0.00 | N.M. | N.M. | N.M. |
| BLNK | 26.75 | 1,360 | 950 | -67 | N.M. | 3 | 6 | 21 | 344.3 | 152.5 | 45.4 | -0.38 | -0.58 | -1.33 | N.M. | N.M. | N.M. |
| CHPT | 18.87 | 6,358 | 4,321 | -278 | N.M. | 145 | 146 | 241 | 29.9 | 29.5 | 17.9 | -0.42 | -0.85 | -0.99 | N.M. | N.M. | N.M. |
| DCFC | 8.30 | 1,124 | 1,770 | N.M. | N.M. | - | 47 | 56 | N.M. | 37.7 | 31.5 | NULL | -0.21 | -0.36 | N.M. | N.M. | N.M. |
| EVGO | 11.72 | 3,104 | 4,084 | -92 | N.M. | - | - | 22 | N.M. | N.M. | 183.8 | NULL | -0.50 | -0.09 | N.M. | N.M. | N.M. |
| WBX | 10.11 | 1,633 | 2,523 | N.M. | N.M. | 8 | 20 | 72 | 314.6 | 128.2 | 35.3 | -0.21 | -0.39 | -1.98 | N.M. | N.M. | N.M. |
| VLTA | 2.91 | 490 | 968 | N.M. | N.M. | 15 | 19 | 32 | 63.4 | 49.7 | 29.9 | -0.23 | -0.41 | -1.71 | N.M. | N.M. | N.M. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Clean Fuel Technologies** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PSIX | 1.60 | 37 | 243 | N.M. | N.M. | 546 | 418 | 456 | 0.4 | 0.6 | 0.5 | 0.38 | -0.73 | -1.57 | 4.2 | N.M. | N.M. |
| WPRT | 1.66 | 223 | 361 | -24 | N.M. | 305 | 252 | 312 | 1.2 | 1.4 | 1.2 | 0.01 | -0.05 | 0.06 | 184.9 | N.M. | 26.5 |
| XEBEF | 0.54 | 84 | 346 | -21 | N.M. | 49 | 57 | 126 | 7.0 | 6.1 | 2.7 | 0.03 | -0.33 | -0.11 | 17.2 | N.M. | N.M. |
| LXFR | 16.97 | 465 | 612 | 59 | 0.0 | 373 | 325 | 374 | 1.6 | 1.9 | 1.6 | 0.88 | 1.01 | 1.32 | 19.4 | 16.8 | 12.8 |
| **Advanced Fuel & Chemicals** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MNTK | 16.15 | 2,319 | 1,471 | 61 | 0.0 | 106 | 100 | 148 | 13.9 | 14.7 | 9.9 | 0.05 | 0.04 | -0.02 | 306.4 | 455.1 | N.M. |
| CLNE | 8.17 | 1,816 | 1,184 | 3 | 0.0 | 344 | 292 | 256 | 3.4 | 4.1 | 4.6 | 0.07 | -0.05 | -0.45 | 124.5 | N.M. | N.M. |
| ANRG | 7.50 | 171 | 1,164 | -4 | N.M. | 90 | 128 | 154 | 13.0 | 9.1 | 7.6 | -0.13 | -0.39 | -0.22 | N.M. | N.M. | N.M. |
| LFG | 19.05 | 2,280 | 3,442 | -11 | N.M. | - | - | 77 | N.M. | N.M. | 44.6 | NULL | -0.73 | -0.09 | N.M. | N.M. | N.M. |
| BNET | 1.24 | 53 | 65 | -2 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.10 | -0.16 | -0.11 | N.M. | N.M. | N.M. |
| GEVO | 3.72 | 875 | 637 | -57 | N.M. | 24 | 6 | 1 | 26.0 | 115.0 | 895.2 | -2.31 | -0.64 | -0.28 | N.M. | N.M. | N.M. |
| REX | 33.11 | 591 | 1,514 | 84 | 0.1 | 418 | 373 | 775 | 3.6 | 4.1 | 2.0 | 0.07 | 0.05 | 0.89 | 482.5 | 726.4 | 37.2 |
| MEOH | 38.41 | 2,704 | 5,172 | 1,123 | 0.0 | 3,284 | 2,650 | 4,415 | 1.6 | 2.0 | 1.2 | 0.52 | -2.14 | 6.34 | 74.3 | N.M. | 6.1 |
| GPRE | 40.23 | 2,365 | 2,186 | -9 | N.M. | 2,417 | 1,924 | 2,827 | 0.9 | 1.1 | 0.8 | -4.40 | -3.50 | -1.39 | N.M. | N.M. | N.M. |
| VTNR | 7.30 | 552 | 363 | -46 | N.M. | 18 | 47 | 116 | 19.8 | 7.7 | 3.1 | -0.29 | -0.55 | -0.62 | N.M. | N.M. | N.M. |
| **Transportation Solutions** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HYRE | 1.03 | 22 | 90 | -26 | N.M. | 16 | 25 | 36 | 5.7 | 3.6 | 2.5 | -0.90 | -0.87 | -1.32 | N.M. | N.M. | N.M. |
| YAYO | 0.46 | 32 | 29 | -5 | N.M. | 7 | 8 | 10 | 4.2 | 3.8 | 2.8 | -0.14 | -0.12 | -0.43 | N.M. | N.M. | N.M. |
| **Average** |  |  |  |  |  |  |  |  | **1,041.1** |  | **1,275.9** |  |  |  | **124.1** | **347.1** | **32.2** |

Source: Thomson Reuters

Figure 22: Industrial Climate and Ag Technology Comp Table

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | FY18 | FY19 | FY20 | FY18 | FY19 | FY20 | FY18 | FY19 | FY20 | FY18 | FY19 | FY20 |
| Ticker | Price | MCap ($m) | EV  ($m) | TTM EBITDA | EV/ EBITDA | Rev ($m) | Rev ($m) | Rev ($m) | EV/Rev | EV/Rev | EV/Rev | EPS ($) | EPS ($) | EPS ($) | P/E | P/E | P/E |
| **Smart Building Solutions** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BMI | 100.42 | 2,939 | 3,030 | 111 | 0.0 | 425 | 426 | 505 | 7.1 | 7.1 | 6.0 | 1.63 | 1.70 | 2.09 | 61.8 | 59.1 | 48.1 |
| ESE | 89.52 | 2,314 | 2,134 | 143 | 0.0 | 726 | 730 | 715 | 2.9 | 2.9 | 3.0 | 2.89 | 2.06 | 2.38 | 31.0 | 43.6 | 37.7 |
| EFOI | 0.74 | 7 | 28 | N.M. | N.M. | 13 | 17 | 10 | 2.2 | 1.6 | 2.8 | -2.94 | -1.79 | -1.97 | N.M. | N.M. | N.M. |
| OESX | 1.64 | 51 | 73 | 4 | 0.0 | 151 | 117 | 124 | 0.5 | 0.6 | 0.6 | 0.43 | 0.86 | 0.21 | 3.8 | 1.9 | 7.9 |
| LYTS | 6.38 | 170 | 280 | 25 | 0.0 | 329 | 306 | 316 | 0.9 | 0.9 | 0.9 | -0.05 | 0.14 | 0.22 | N.M. | 45.9 | 28.9 |
| VIEW | 2.34 | 513 | 593 | -324 | N.M. | 24 | 32 | 74 | 24.4 | 18.3 | 8.0 | -1.32 | -1.12 | -1.94 | N.M. | N.M. | N.M. |
| AYI | 183.24 | 5,994 | 6,497 | 598 | 0.0 | 3,673 | 3,326 | 3,461 | 1.8 | 2.0 | 1.9 | 8.35 | 6.75 | 8.68 | 21.9 | 27.2 | 21.1 |
| DOX | 88.95 | 10,927 | 9,175 | N.M. | N.M. | 4,087 | 4,169 | 4,289 | 2.2 | 2.2 | 2.1 | 3.49 | 3.73 | 3.85 | 25.5 | 23.9 | 23.1 |
| AMRC | 70.02 | 3,629 | 4,664 | 180 | 0.0 | 867 | 1,032 | 1,216 | 5.4 | 4.5 | 3.8 | 0.95 | 1.14 | 1.41 | 73.4 | 61.2 | 49.7 |
| AMX | 19.39 | 61,856 | 96,137 | 16,540 | 0.0 | 1,007,348 | 839,707 | 855,535 | 0.1 | 0.1 | 0.1 | 1.03 | 0.45 | 1.09 | 18.9 | 43.4 | 17.7 |
| CARR | 43.97 | 37,004 | 53,828 | 3,965 | 0.0 | 18,608 | 17,456 | 20,613 | 2.9 | 3.1 | 2.6 | 2.66 | 2.39 | 2.01 | 16.5 | 18.4 | 21.9 |
| FIX | 108.44 | 3,880 | 3,900 | 283 | 0.0 | 2,615 | 2,857 | 3,074 | 1.5 | 1.4 | 1.3 | 3.07 | 4.08 | 3.92 | 35.4 | 26.6 | 27.7 |
| COMM | 10.73 | 2,234 | 12,465 | 1,027 | 0.0 | 8,345 | 8,436 | 8,587 | 1.5 | 1.5 | 1.5 | -1.73 | -2.02 | -1.83 | N.M. | N.M. | N.M. |
| CRKN | 0.77 | 12 | 52 | -21 | N.M. | 1 | 0 | - | 102.7 | 518.5 | N.M. | -0.75 | -1.04 | -1.16 | N.M. | N.M. | N.M. |
| EFOI | 0.74 | 7 | 28 | N.M. | N.M. | 13 | 17 | 10 | 2.2 | 1.6 | 2.8 | -2.94 | -1.79 | -1.97 | N.M. | N.M. | N.M. |
| ESE | 89.52 | 2,314 | 2,134 | 143 | 0.0 | 726 | 730 | 715 | 2.9 | 2.9 | 3.0 | 2.89 | 2.06 | 2.38 | 31.0 | 43.6 | 37.7 |
| HUBB | 222.47 | 11,942 | 12,515 | 736 | 0.0 | 3,947 | 3,683 | 4,194 | 3.2 | 3.4 | 3.0 | 6.72 | 6.47 | 7.11 | 33.1 | 34.4 | 31.3 |
| IRBT | 59.71 | 1,626 | 1,545 | -35 | N.M. | 1,214 | 1,430 | 1,565 | 1.3 | 1.1 | 1.0 | 3.04 | 5.41 | 1.47 | 19.7 | 11.0 | 40.7 |
| KTOS | 15.58 | 1,962 | 2,467 | 51 | 0.0 | 718 | 748 | 812 | 3.4 | 3.3 | 3.0 | 0.12 | 0.71 | 0.01 | 126.8 | 21.9 | 1,528.9 |
| MXL | 41.44 | 3,246 | 5,964 | 232 | 0.0 | 317 | 479 | 892 | 18.8 | 12.5 | 6.7 | -0.26 | -1.19 | 0.64 | N.M. | N.M. | 65.0 |
| SLAB | 146.84 | 5,025 | 6,355 | 120 | 0.0 | 474 | 511 | 721 | 13.4 | 12.4 | 8.8 | -2.37 | -2.56 | -1.30 | N.M. | N.M. | N.M. |
| TEL | 137.31 | 43,917 | 50,113 | 3,682 | 0.0 | 13,448 | 12,172 | 14,923 | 3.7 | 4.1 | 3.4 | 6.30 | 1.56 | 7.58 | 21.8 | 88.3 | 18.1 |
| **Emissions Control** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ADES | 4.89 | 93 | 50 | 6 | 0.1 | 70 | 67 | 100 | 0.7 | 0.7 | 0.5 | 1.97 | -0.23 | 3.04 | 2.5 | N.M. | 1.6 |
| CLIR | 1.15 | 42 | 36 | -7 | N.M. | - | - | 1 | N.M. | N.M. | 59.3 | -0.32 | -0.25 | -0.25 | N.M. | N.M. | N.M. |
| LIQT | 0.48 | 18 | 124 | N.M. | N.M. | 33 | 23 | 18 | 3.8 | 5.5 | 6.8 | 0.00 | -0.46 | -0.52 | 176.4 | N.M. | N.M. |
| PFIE | 1.28 | 60 | 41 | 1 | 0.0 | 39 | 21 | 26 | 1.1 | 1.9 | 1.6 | 0.05 | -0.05 | -0.02 | 26.8 | N.M. | N.M. |
| FTEK | 1.40 | 42 | 6 | N.M. | N.M. | 30 | 23 | 24 | 0.2 | 0.3 | 0.3 | -0.30 | -0.17 | -0.03 | N.M. | N.M. | N.M. |
| **Climate & Environmental Solutions** | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CLH | 118.79 | 6,427 | 7,513 | 810 | 0.0 | 3,412 | 3,144 | 3,806 | 2.2 | 2.4 | 2.0 | 1.81 | 1.89 | 3.56 | 65.5 | 62.9 | 33.3 |
| QRHC | 4.74 | 90 | 187 | 7 | 0.1 | 99 | 99 | 156 | 1.9 | 1.9 | 1.2 | -0.00 | 0.06 | 0.09 | N.M. | 81.9 | 52.9 |
| HSC | 6.60 | 524 | 2,676 | 212 | 0.0 | 1,204 | 1,534 | 1,848 | 2.2 | 1.7 | 1.4 | 0.21 | -0.13 | 0.31 | 31.9 | N.M. | 21.4 |
| ERII | 23.94 | 1,336 | 1,115 | 20 | 0.0 | 87 | 119 | 104 | 12.8 | 9.4 | 10.7 | 0.20 | 0.51 | 0.25 | 120.1 | 47.1 | 95.6 |
| **Climate Tech Infrastructure Solutions** | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AZZ | 46.64 | 1,156 | 1,427 | 181 | 0.0 | 1,062 | 839 | 903 | 1.3 | 1.7 | 1.6 | 2.37 | 2.13 | 3.32 | 19.7 | 21.9 | 14.0 |
| CECE | 9.67 | 334 | 259 | 29 | 0.0 | 342 | 316 | 324 | 0.8 | 0.8 | 0.8 | 0.54 | 0.36 | 0.07 | 17.8 | 26.8 | 134.3 |
| OEG | 1.07 | 123 | 399 | N.M. | N.M. | 23 | 38 | 83 | 17.0 | 10.4 | 4.8 | -0.48 | -1.01 | -0.84 | N.M. | N.M. | N.M. |
| IEA | 14.40 | 700 | 671 | 125 | 0.0 | 1,460 | 1,753 | 2,078 | 0.5 | 0.4 | 0.3 | -0.97 | -0.09 | -0.59 | N.M. | N.M. | N.M. |
| AROC | 7.96 | 1,239 | 2,682 | 308 | 0.0 | 965 | 875 | 781 | 2.8 | 3.1 | 3.4 | 0.89 | 0.32 | 0.15 | 8.9 | 25.0 | 53.1 |
| NGS | 10.04 | 125 | 109 | 17 | 0.1 | 78 | 68 | 72 | 1.4 | 1.6 | 1.5 | -0.30 | 0.16 | -0.54 | N.M. | 62.7 | N.M. |
| ENG | 1.62 | 58 | 37 | -12 | N.M. | 56 | 64 | 36 | 0.7 | 0.6 | 1.0 | -0.05 | -0.02 | -0.28 | N.M. | N.M. | N.M. |
| ATCX | 8.16 | 318 | 746 | 46 | 0.0 | - | 468 | 539 | N.M. | 1.6 | 1.4 | -0.01 | -1.12 | -1.05 | N.M. | N.M. | N.M. |
| GVP | 1.27 | 27 | 34 | -4 | N.M. | 83 | 58 | 55 | 0.4 | 0.6 | 0.6 | -0.38 | -0.32 | 0.07 | N.M. | N.M. | 18.5 |
| AGX | 37.42 | 531 | 126 | 52 | 0.1 | 239 | 392 | 509 | 0.5 | 0.3 | 0.2 | -2.53 | 1.24 | 2.82 | N.M. | 30.1 | 13.3 |
| NVEE | 134.21 | 2,087 | 2,213 | 120 | 0.1 | 509 | 659 | 707 | 4.3 | 3.4 | 3.1 | 1.96 | 1.70 | 3.34 | 68.5 | 78.9 | 40.2 |
| **Ag-tech and Bio-Ag** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BHIL | 3.80 | 782 | 1,200 | -129 | N.M. | 80 | 114 | 147 | 15.1 | 10.5 | 8.1 | -0.25 | -0.39 | -0.66 | N.M. | N.M. | N.M. |
| AGRI | 1.76 | 27 | 24 | -9 | N.M. | - | - | - | N.M. | N.M. | N.M. | -0.39 | -0.29 | -0.66 | N.M. | N.M. | N.M. |
| AGFS | 1.84 | 97 | 457 | 60 | 0.0 | 170 | 158 | 166 | 2.7 | 2.9 | 2.8 | -0.79 | -1.21 | -0.63 | N.M. | N.M. | N.M. |
| AVD | 20.43 | 631 | 542 | 66 | 0.0 | 468 | 459 | 557 | 1.2 | 1.2 | 1.0 | 0.47 | 0.39 | 0.62 | 43.6 | 53.0 | 33.0 |
| APPH | 3.32 | 352 | 373 | -103 | N.M. | - | - | 9 | N.M. | N.M. | 41.3 | NULL | -1.69 | -1.21 | N.M. | N.M. | N.M. |
| RKDA | 1.07 | 24 | -6 | N.M. | N.M. | 1 | 8 | 7 | -4.7 | -0.7 | -0.8 | -4.53 | -0.72 | -0.37 | N.M. | N.M. | N.M. |
| BIOX | 12.25 | 759 | 727 | 45 | 0.0 | 160 | 172 | 207 | 4.5 | 4.2 | 3.5 | -0.61 | 0.08 | -0.22 | N.M. | 153.2 | N.M. |
| CLXT | 0.28 | 13 | 87 | -25 | N.M. | 7 | 24 | 26 | 11.9 | 3.6 | 3.3 | -1.21 | -1.30 | -0.82 | N.M. | N.M. | N.M. |
| CUBXF | 0.32 | 57 | 152 | -26 | N.M. | 5 | 1 | 5 | 28.3 | 242.6 | 28.7 | -0.10 | -0.09 | -0.20 | N.M. | N.M. | N.M. |
| FMEGF | 0.91 | 35 | 67 | -57 | N.M. | 24 | 46 | 36 | 2.8 | 1.5 | 1.9 | -2.90 | -2.08 | -1.82 | N.M. | N.M. | N.M. |
| KSLLF | 0.52 | 109 | 327 | -37 | N.M. | 0 | 1 | 3 | 3,228.1 | 368.5 | 114.5 | -0.03 | -0.09 | -0.22 | N.M. | N.M. | N.M. |
| SANW | 0.93 | 39 | 177 | -21 | N.M. | 110 | 80 | 84 | 1.6 | 2.2 | 2.1 | 0.10 | -0.63 | -0.59 | 9.2 | N.M. | N.M. |
| UGRO | 6.32 | 67 | 78 | -0 | N.M. | 24 | 26 | 62 | 3.2 | 3.0 | 1.3 | -1.79 | -1.00 | -0.08 | N.M. | N.M. | N.M. |
| **Average** |  |  |  |  |  |  |  |  | 69.7 | 24.9 | 7.1 |  |  |  | 42.7 | 45.9 | 89.9 |

Source: Thomson Reuters

ABOUT THE ANALYSTS

|  |  |
| --- | --- |
| Shawn Severson  President & Co-Founder | Shawn Severson is President & Co-Founder of Water Tower Research and is a member of the Board of Managers. Prior to co-founding Water Tower Research and previously founding predecessor firm alphaDIRECT Advisors, Shawn spent over 20 years as a senior equity research analyst covering the Technology and ClimateTech sectors, including senior positions at JMP Securities, ThinkEquity, Robert W. Baird (London), and Raymond James.  Shawn started his career as an Equity Research Associate at Kemper Securities. Shawn was frequently ranked as a top research analyst, including one of the Wall Street Journal's "Best on the Street" stock pickers and a StarMine Analyst Awards Top 3 stock picker. Shawn holds a BA in Finance and Economics from Augustana College. |
| Graham Mattison  Senior Research Analyst | Graham Mattison brings more than 20 years of experience in equity research, investor relations, and corporate operations, growth, and development. Graham was the Investor Relations Officer for two NASDAQ-listed companies where he led multiple equity raises as well as managed an activist investor campaign, M&A and corporate restructuring, and a NASDAQ delisting and relisting.  Previously, he was a Senior Equity Research Analyst, most recently at Lazard Capital Markets, covering the industrial and cleantech industries. He began his career in Southeast Asia as an Investment Analyst for Daiwa Securities. He was also co-founder of an online residential real estate start-up that developed a web-based auction platform.  Graham received his BA in East Asian Studies with minors in Economics and History from Hobart College and his MBA in Finance with honors from the Thunderbird International Business School at Arizona State University. He is an Investor Relations Charter (IRC) holder from the National Investor Relations Institute. |

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